

REMARKS/ARGUMENTS

Claims 1-20 are pending in this application. Claims 1, 7, and 11 are independent. Claims 11-20 are new. Claims 1-10 are amended. No new matter has been added.

OBJECTIONS TO THE DRAWINGS

On page 2, the Office Action objects to Fig. 1 for allegedly failing to show a “structural detail that is essential for a proper understanding of the disclosed invention.” In particular, the Office Action alleges that Node B must be depicted in Fig. 1. Applicant respectfully traverses these drawing objections.

In response, Applicant respectfully submits that the drawing objection is clearly improperly as it does not comply with MPEP § 608.02(d) and 37 § CFR 1.83. While a “drawing in a nonprovisional application must show every feature of the invention specified in the claims” (emphasis added), Applicant respectfully submits that Node B is not claimed. Thus, there is no requirement to depict Node B in Fig. 1.

On page 3, the Office Action object to Figs. 4-9 as “not described by the detail labels (described only by reference labels) for each block as described in Fig. 1. Applicant respectfully traverses this drawing objection.

In response, Applicant respectfully submits that this drawing objection does not rely upon either the MPEP or CFR for support. While MPEP § 608.02 and 37 CFR § 1.84 (p)(1) indicate that reference characters should be used, there is no

requirement for “detail labels.” Moreover, because CFR § 1.84 (p)(1) indicates that “numerals are preferred,” Applicant respectfully submits that Figs. 4-9 are fully compliant with MPEP § 608.02 because they clearly depict reference numbers.

Applicant respectfully submits a revised version of Fig. 14 corrected so that Fig. 14 accurately reflects the disclosure. When describing Fig. 14, paragraph [0093] of the published version of the specification recites, in part: “The special case determination step 1406 determines if transmission mode is STTD or FMB1, a pilot field is present, and 8 or 16 pilot bits are used. If these criteria are met, the method ends and the output derotated pilot symbol is provided. Otherwise, the method continues with a STTD determination step 1412.” Consequently, Applicant has revised Fig. 14 to label the arrow exiting the right of block 1406 with “YES” and to terminate the arrow at block 1418, corresponding to the end of the method.

For the reasons listed above, Applicant respectfully requests withdrawal of all of the drawing objections.

REJECTIONS UNDER 35 U.S.C. § 112, ¶2

On page 3, the Office Action rejects claims 1-6 under 35 U.S.C. § 112, second paragraph because claim 1 recites “said” controller on line 4. In response, claim 1 now recites -- processor -- instead of “controller.” “Processor” has a proper antecedent on line 3. Thus, Applicant respectfully requests withdrawal of these rejections of claims 1-6 under 35 U.S.C. § 112, second paragraph.

On page 3, the Office Action rejects claims 1-10 under 35 U.S.C. § 112, second paragraph because claims 1 and 7 recite both “pilot symbols” and “symbols.” In response, claims 1 and 7 no longer recite “pilot” symbols. Thus, Applicant respectfully requests withdrawal of these rejections of claims 1-10 under 35 U.S.C. § 112, second paragraph.

REJECTIONS UNDER 35 U.S.C. § 102(e)

On pages 4 and 5, the Office Action rejects claims 7-10 under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 6,934,245 to Kwak et al (hereinafter “Kwak”). Applicant respectfully traverses these rejections.

Independent claim 7 recites, in part, the following subject matter: “outputting the symbols in an interleaved sequence” (emphasis added). The printed version of the specification provides support for this subject matter, for example, in paragraph [0087]. While the symbols may have originally arrived in a sequence of 1st, 2nd, 3rd, 4th, the derotator may output them in an interleaved manner. Thus, the output sequence may have been arranged as 1st, 3rd, 2nd, 4th.

Applicant respectfully submits that Kwak and the other references of record, alone or in combination, fail to disclose, suggest, or teach this subject matter. While the Office Action alleges that Kwak outputs symbols in a temporal ordered sequence by relying upon lines 53-65 of col. 8 in Kwak, Applicant respectfully submits that Kwak does not output an interleaved sequence of symbols.

In addition, Applicant respectfully submits that Kwak clearly differs from the recited claims by teaching the use of separate derotators for normal and Tx Diversity mode. One of Kwak's derotators treats a first signal [Fig. 5: 523], while the second derotator, in Tx Diversity mode, treats a second signal [Fig. 5: 524]. Consequently, Applicant respectfully submits that Kwak teaches away from using a single derotator, a unique functional block that behaves differently depending upon whether it uses a normal or Tx Diversity mode. Applicant further submits that the use of a single derotator provides a considerable advantage in terms of hardware components compared to Kwak's use of two blocks for normal and Tx Diversity.

For the reasons listed above, Applicant respectfully submits that claim 7 is allowable over Kwak. Claims 8-10 depend from claim 7. Thus, Applicant respectfully submits that claims 8-10 are also allowable at least due to their dependencies from an allowable claim. Therefore, Applicant respectfully requests withdrawal of the rejections of claims 7-10 under 35 U.S.C. § 102(e).

NEWLY ADDED CLAIMS 11-20

Independent claim 11 recites, in part, the following subject matter: “a Primary Common Control Physical Channel (P-CCPCH) processor block that receives despread symbols and processes the despread symbols; a first derotator block that receives the processed symbols from the P-CCPCH processor block, wherein the first derotator block further comprises: a pilot derotator sub-block that operates only on pilot symbols within the processed symbols from the P-CCPCH processor block and produces a first signal wherein non-pilot symbols are unaltered, a general derotator sub-block that receives the first signal from the pilot derotator sub-block, applies different weights to the processed symbols from the P-CCPCH processor block based upon whether a transmission mode is closed loop, and produces a second signal; and a second derotator block that receives the second signal from the general derotator sub-block, performs switching operations based upon whether the transmission mode is Space Time coding based Transmit Diversity (STTD), and produces an output signal” (emphasis added). The printed version of the specification provides support for this subject matter, for example, in paragraphs [0044] through [0048].

Claim 12 recites, in part, the following subject matter: “a first P-CCPCH processor switch that selectively forwards the despread symbols based upon whether the transmission mode is STTD; a second P-CCPCH processor switch that sends every despread symbol that is a multiple of ten to a first dump” (emphasis

added). The printed version of the specification provides support for this subject matter, for example, in paragraphs [0049] and [0050].

Claim 13 recites, in part, the following subject matter: “a first switch that selectively forwards the processed symbols based upon whether there is a compressed mode; a compressed mode path comprising a summer that adds two pilot symbols from the processed symbols to produce a sum when there is a compressed mode, and a bit shifter that divides the sum of the two pilot symbols by two; a second switch that selectively forwards the pilot symbols based upon whether the transmission mode is STTD; and a third switch that selectively outputs the pilot symbols as the first signal when a time instant is T1 or T3” (emphasis added). The printed version of the specification provides support for this subject matter, for example, in paragraphs [0052], [0053], and [0054].

Claim 14 recites, in part, the following subject matter: “a plurality of switches that selectively forward the first signal based upon whether the transmission mode is STTD; and a plurality of multipliers that apply weights to the first signal based upon the transmission mode and produce the second signal” (emphasis added). The printed version of the specification provides support for this subject matter, for example, in paragraph [0057].

Claim 15 recites, in part, the following subject matter: “a plurality of switches that selectively forward the second signal based upon the transmission mode and whether a pilot field is present in the second signal; and a switch that sends the

second signal to a second dump when transmission of P-CCPCH with STDD is present” (emphasis added). The printed version of the specification provides support for this subject matter, for example, in paragraphs [0064] and [0086].

Applicant respectfully submits that independent claim 11 is allowable over the references of record because Kwak lacks the recited combination of a P-CCPCH processor block, a first derotator block, and second a derotator block. Claims 12-14 depend from claim 11. Thus, Applicant respectfully submits that claims 12-14 are also allowable due to their dependencies from an allowable claim.

Claim 16 recites, in part, the following subject matter: “dumping the symbols when transmission of P-CCPCH with STDD is present” (emphasis added). The printed version of the specification provides support for this subject matter, for example, in paragraph [0090]. This step is also depicted in block 1104 of Fig. 11.

Claim 17 recites, in part, the following subject matter: “determining whether two pilot bits or four pilot bits are used” (emphasis added). The printed version of the specification provides support for this subject matter, for example, in paragraph [0091]. This step is also depicted in block 1206 of Fig. 12.

Claim 18 recites, in part, the following subject matter: “determining whether Feed Back Mode 1 (FBM1) or Feed Back Mode 2 (FBM2) is used” (emphasis added). The printed version of the specification provides support for this subject matter, for example, in paragraph [0092]. This step is also depicted in block 1302 of Fig. 13.

Claim 19 recites, in part, the following subject matter: “dropping a Least Significant Bit (LSB) of intermediate signals when transmit diversity is present” (emphasis added). The printed version of the specification provides support for this subject matter, for example, in paragraph [0093]. This step is also depicted in blocks 1402 and 1404 of Fig. 14.

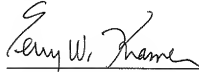
Claim 20 recites, in part, the following subject matter: “determining whether the transmission mode is STTD; and ordering the symbols based upon the determining step” (emphasis added). The printed version of the specification provides support for this subject matter, for example, in paragraph [0093]. These steps are also depicted in blocks 1412, 1414, and 1416 of Fig. 14.

Claims 16-20 depend from claim 7. Thus, Applicant respectfully submits that claims 16-20 are allowable due to their dependencies from an allowable claim.

CONCLUSION

In view of the remarks above, Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. In the event that the fees submitted prove to be insufficient in connection with the filing of this paper, please charge our Deposit Account Number 50-0578 and please credit any excess fees to such Deposit Account. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Juergen Krause-Polstarff, of NXP Corporation at (408) 474-9062.

Respectfully submitted,
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